4th SmartRaCon Workshop

Do you want to learn about innovative technologies that enable new approaches for train control, command and signalling systems?

20 October 2022

Parque Tecnológico de San Sebastián
Paseo Mikeletegi, 53 - 20009

DONOSTIA - SAN SEBASTIÁN

CEIT, RAILENIUM, NSL, and DLR have founded the consortium Smart Rail Control (SmartRaCon) to develop new concepts, approaches and technologies for train control, command and signalling systems of the future. In this workshop, you can have a Scientific view of the progress and results regarding SmartRaCon involvement in Europe's Rail (ex Shitf2Rail) integrated European railway network.

SCHEDULE

09:00 Welcome coffee

09:15 General Introduction Authorities (to be confirmed), Juan Melendez, Managing Director (CEIT)

09:45 SmartRaCon Introduction Michael Meyer zu Hörste (DLR)

10:00 Introduction into X2Rail-4 Philippe Prieels (ALSTOM)

10:20 Coffee Break

10:40 -On-board Train Integrity (X2R4 TD 2.5)
- Quantitative Safety Requirements of the New Onboard Train Integrity Function (RAILENIUM)
- Laboratory Simulation for On-Board Train Integrity (CEIT)
- Statistical model checking-based performance analysis of the onboard train integrity (RAILENIUM)
- Cost-Benefit Analysis for OTI – methodology and result (DLR)

12:00 Lunch Break

13:00 Traffic Management System (X2R4 TD 2.9)
- An iterative algorithm for the coordinated train rerouting and rescheduling problem (RAILENIUM)

Smart Wayside Object Controller (X2R4 TD 2.10)
- Performance evaluation of data collection and forwarding in NEWNECTAR architecture based on a reconfigurable wireless transceiver (RAILENIUM)
- Electromagnetic Energy Harvesting and Wireless Power Transfer Novel Concepts for the Railway Environment (RAILENIUM)

Common Data Model (L4R / L4R2)
- Ontology-based Conceptual Model development for the railway domain: A maintenance case study (DLR, RAILENIUM, CEIT)

14:20 Coffee Break

14:40 KPI method development and integrated assessment (IMPACT-2 / WA 2)
- The KPI-Model – An integrated KPI assessment methodology to estimate the impact of different innovations in the railway sector (DLR)

Combined Customer Experience Model & Modal Shift Model (IMPACT-2 / WA 1.2)
- Gaining accurate input data for a comprehensive assessment of the railway system (DLR)

Data and SPD definition (IMPACT-2 / WA 1.3)
- IMPACT-2 methodology to include customer experience improvements in modal shift estimations (VTI)

Energy Simulation (FINE1 / 2)
- Development of energy assessment methodology and simulation tool in Shift2Rail projects FINE1 and OPEUS (DLR)

16:00 Coffee Break

16:20 Round table with FM of Shift2Rail

17:20 Closure

17:30 End of 4th SmartRaCon Scientific Seminar

In-Person Workshop Registration

Online Workshop Registration

Associated projects:

Horizon 2020 European Union Funding for Research & Innovation